

Customer No.: 31561
Application No.: 10/707,874
Docket No.: 9945-US-PA-1

REMARKS

Present Status of the Application

Claims 8-20 remain pending of which claims 8 and 17 have been amended to more explicitly describe the claimed invention. Amendments to the proposed claims 8 and 17 are well support at FIG. 1A-1B and line 9 of paragraph [0025]. Therefore, it is believed that no new matter adds by way of amendment to claims or otherwise to the application.

In the outstanding Office Action, claims 8-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US-6,420,237, hereinafter Chang) in view of Wong et al. (US-6,747,986, hereinafter Wong).

For at least the following reasons, Applicant respectfully submits that claims 8-20 are in proper condition for allowance. Reconsideration is respectfully requested.

Discussion of the claim rejection under 35 USC 103

The Office Action rejected claims 8-20 under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US-6,420,237, hereinafter Chang) in view of Wong et al. (US-6,747,986, hereinafter Wong).

In rejecting the above claims, the Office Action stated that Chang discloses every features of the claimed invention except for the process step of performing a threshold voltage adjustment to result in different threshold voltages of the channel regions under the conductive blocks of different rows. However, the Office Action stated Wong discloses a step of performing a threshold voltage adjustment to result in different threshold voltages of the channel regions under the conductive blocks of different rows to

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increase the storage capacity. Therefore, it would have been obvious to a person skilled in the art at the time of the invention to perform a step of threshold voltages of the channel regions under the conductive blocks of different rows in the invention of Chang, since, as disclosed by Wong, it increases the storage capacity.

Applicants respectfully disagree and traverse the above rejections as set forth below.

The present invention is directed to a method of fabricating a multi-bit flash memory. The amended proposed independent claim 8, among other things, recites at least [forming an isolation layer in the conductive layer to partition the conductive layer into more than two conductive blocks arranged in an array with a plurality of rows extending from a region predetermined for forming one bit line to another region predetermined for forming another bit line and a plurality of columns, wherein each row comprises two conductive blocks, and each column comprises more than two conductive blocks]. The advantage of above features is that at least more than two bits of information may be stored in a single memory cell and thereby increase the storage capacity.

Applicants respectfully submit that proposed independent claim 8, as amended, is allowable over Chang and Wong because both Chang and Wong substantially fail to teach suggest or disclose every features of the claimed invention. More specifically, both Chang and Wong substantially fails to teach, suggest or disclose a method of fabricating a multi-bit flash memory comprising at least a step of [forming an isolation layer in the conductive layer to partition the conductive layer into more than two conductive

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blocks arranged in an array with a plurality of rows extending from a region predetermined for forming one bit line to another region predetermined for forming another bit line and a plurality of columns, wherein each row comprises two conductive blocks, and each column comprises more than two conductive blocks] as required by the amended proposed independent claim 8.

Instead, Chang substantially teaches a method of fabricating TWIN Bit Cell flash memory, wherein the insulating region (87) divides the conductive layer (86) into TWO conductive blocks (90) (please see 5-9, and lines 38-41 of col. 4), and Wong also substantially teaches a memory transistor comprising TWO separate Floating gates (240A, 240B). Therefore, it is clear that both Chang and Wong substantially fail to teach, suggest or disclose at least [forming an isolation layer in the conductive layer to partition the conductive layer into MORE THAN TWO conductive blocks arranged in an array with a plurality of rows extending from a region predetermined for forming one bit line to another region predetermined for forming another bit line and a plurality of columns, wherein each row comprises two conductive blocks, and each column comprises more than two conductive blocks] as required by the amended proposed independent claim 8, instead, Chang substantially teaches using each isolated region (87) to divide the conductive layer (86) into TWO conductive blocks (90). Therefore, the structure and operation of the flash memory of the claimed invention is different compared to that of Chang.

Furthermore, Applicants respectfully submit that the step of performing threshold voltage adjustment of Wong still cannot cure the specific deficiencies of Chang for a t

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least the reason substantially discussed above. Accordingly, Applicants respectfully submit that combination of Chang and Wong, in a manner suggested by the Office Action, cannot possibly render the claimed invention as claimed in the proposed independent claim 8 obvious in this regard.

Because the amended proposed independent claim 17 also recite features that are similar to the amended proposed independent claim 8, therefore Applicants similarly submit that claim 17 also patentably defines over Chang and Wong for at least the same reasons discussed above.

Claims 9-16 and 18-20, which directly or indirectly depend from independent Claims 8 and 17, respectively, are also patentable over Chang and Wong at least because of their dependency from an allowable base claim.

For at least the foregoing reasons, Applicant respectfully submits that claims 8-20 patentably define over Chang and Wong. Reconsideration and withdrawal of above rejections is respectfully requested.

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CONCLUSION

For at least the foregoing reasons, it is believed that all pending claims 8-20 are in proper condition for allowance. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, he is cordially invited to telephone the undersigned counsel to arrange for such a conference.

Respectfully submitted,

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